

CLAIMS

Kindly amend the claims as follows:

1. (Original) A speech recognition system comprising:
 - a reference library to store a plurality of reference words, each having a multiplicity of states; and
 - a speech recognizer to match an input signal to one of said plurality of reference words, said speech recognizer having an active range storage unit to store a multiplicity of active ranges defining said states on whom recognition operations are to be performed for a current frame.
2. (Original) A system according to claim 1 and having at least one active range per reference word.
3. (Original) A system according to claim 2 and wherein each said active range has a start state and an end state and wherein said start state is the first state to be processed in said word for said current frame and said end state is the last state to be processed in said current frame.
4. (Original) A system according to claim 2 and wherein each said active range minimally comprises the active states within said reference word.
5. (Original) A system according to claim 4 and wherein each said active range also comprises at least one inactive state not able to become active in said current frame.
6. (Original) A system according to claim 1 and wherein said speech recognizer comprises an active range updater to determine the beginning and end of each of said active ranges.
7. (Original) A system according to claim 1 and wherein said speech recognizer comprises an active range Viterbi calculator and an active range pruner to process states within said active ranges.

8. (Original) A system according to claim 1 and comprising a state buffer storing all of said states in a fixed order and their active/inactive status.

9. (Original) A speech recognition system comprising:

a reference library to store a plurality of reference words, each having a multiplicity of states; and

a speech recognizer to match an input signal to one of said plurality of reference words, said speech recognizer to determine a multiplicity of active ranges defining states to be processed for each frame and to perform recognition operations for said frame only on states within said active ranges.

10. (Original) A system according to claim 9 and having at least one active range per reference word.

11. (Original) A system according to claim 10 and wherein each said active range has a start state and an end state and wherein said start state is the first state to be processed in said word for said current frame and said end state is the last state to be processed in said current frame.

12. (Original) A system according to claim 10 and wherein each said active range minimally comprises the active states within said reference word.

13. (Original) A system according to claim 12 and wherein each said active range also comprises at least one inactive state not able to become active in said current frame.

14. (Original) A system according to claim 9 and wherein said speech recognizer comprises an active range updater to determine the beginning and end of each of said active ranges.

15. (Original) A system according to claim 9 and wherein said speech recognizer comprises an active range Viterbi calculator and an active range pruner to process states within said active ranges.

16. (Original) A system according to claim 9 and comprising a state buffer storing all of said states in a fixed order and their active/inactive status.

17. (Original) An active range Viterbi calculator comprising:
 means for retrieving active ranges for a current frame; and
 means for performing Viterbi calculations only on states within said active ranges.
18. (Original) A system according to claim 17 and having at least one active range per reference word.
19. (Original) A system according to claim 18 and wherein each said active range has a start state and an end state and wherein said start state is the first state to be processed in said word for said current frame and said end state is the last state to be processed in said current frame.
20. (Original) A system according to claim 18 and wherein each said active range minimally comprises the active states within said reference word.
21. (Original) A system according to claim 20 and also comprising at least one inactive state not able to become active in said current frame.
22. (Original) An active range pruner comprising:
 means for retrieving active ranges for a current frame; and
 means for performing pruning operations only on states within said active ranges.
23. (Original) A system according to claim 22 and having at least one active range per reference word.
24. (Original) A system according to claim 23 and wherein each said active range has a start state and an end state and wherein said start state is the first state to be processed in said word for said current frame and said end state is the last state to be processed in said current frame.
25. (Original) A system according to claim 23 and wherein each said active range minimally comprises the active states within said reference word.
26. (Original) A system according to claim 25 and also comprising at least one inactive state not able to become active in said current frame.
27. (Currently Amended) A speech recognition system having a data structure for a
~~speech recognition system~~, the data structure comprising:

a multiplicity of active ranges, each active range defining states to be processed by said speech recognition system in a current frame and each active range comprising:

a beginning state of said active range, wherein said beginning state is the first active state; and

an end state of said active range, where said end state is the last state able to become active in said current frame.

28. (Original) A system according to claim 27 and having at least one active range per reference word.

29. (Original) A system according to claim 28 and wherein each said active range minimally comprises the active states within said reference word.

30. (Original) A system according to claim 29 and also comprising at least one inactive state not able to become active in said current frame.

31. (Original) A method of recognizing speech, the method comprising:

determining active ranges for each frame to be processed; and

performing recognition operations for each said frame only on states within said active ranges.

32. (Original) A method according to claim 31 and having at least one active range per reference word.

33. (Original) A method according to claim 32 and wherein each said active range has a start state and an end state and wherein said start state is the first state to be processed in said word for said current frame and said end state is the last state able to be processed in said current frame.

34. (Original) A method according to claim 32 and wherein each said active range minimally comprises the active states within said reference word.

35. (Original) A method according to claim 34 and also comprising at least one inactive state not able to become active in said current frame.
36. (Original) A method according to claim 31 and said determining comprises determining the beginning and end of each of said active ranges.
37. (Original) A method according to claim 31 and wherein said performing comprises performing Viterbi calculations.
38. (Original) A method according to claim 37 and wherein said performing comprises reviewing the output of said performing Viterbi calculations and marking states within said active ranges as active or inactive.
39. (Original) A method according to claim 31 and comprising storing all of said states in a fixed order and their active/inactive status.